

THE BIOLOGIST

Vol. 3.

Denver, Colorado, December, 1921.

No. 3

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Mrs. - C. L. Dodds,
2344 Euclid St
Berkeley, Calif.

Mr. D. Milton Craig
Dept. of Biology
Washington & Jefferson College
Washington, Pa.

THE BIOLOGIST

THE OFFICIAL ORGAN OF THE PHI SIGMA HONORARY
BIOLOGICAL SOCIETY.

Vol. 3

Denver, Colorado, December, 1921.

No. 3

DIRECTORY

THE CENTRAL GOVERNING BODY

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Dr. Emory W. Sink.....	1113 Willard St., Ann Arbor, Mich.
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PUBLICATION

THE BIOLOGIST

Editor,	
Erwine Hall Stewart.....	Mesa, Colorado

ACTIVE CHAPTERS

ALPHA CHAPTER

Ohio State University.....	Columbus, Ohio
Secretary Walter W. Randolph.....	51 Highland Ave., Columbus, Ohio

BETA CHAPTER

University of Michigan.....	Ann Arbor, Michigan
Secretary Melville H. Hatch.....	1014 Cornwell Place, Ann Arbor, Michigan

DELTA CHAPTER

University of Maine.....	Orono, Maine
Prof. M. A. Chrysler.....	Orono, Maine

EPSILON CHAPTER

University of Denver.....	Denver, Colorado
Sec. Owen P. Cutler.....	2122 South Clayton St., Denver, Colorado

ZETA CHAPTER

University of Wisconsin.....Madison, Wisconsin
Sec. A. J. Riker...Horticultural Bldg., University of Wis., Madison, Wis.

ETA CHAPTER

University of Akron.....Akron, Ohio
Secretary Miss Lois A. Waltz.....938 Princeton St., Akron, Ohio

THETA CHAPTER

Michigan Agricultural College.....East Lansing, Michigan
Sec. Otto H. Friedmann....Dept. of Bact., M.A.C., East Lansing, Mich.

IOTA CHAPTER

Washington University.....St. Louis, Mo.
Sec. Miss Gladys K. McCosh Dept. of Zoo., Wash. Univ., St. Louis, Mo.

KAPPA CHAPTER

University of Kansas.....Lawrence, Kansas
Sec. Hervey Faris.....1406 Tennessee St., Lawrence, Kansas

LAMBDA CHAPTER

University of Montana.....Missoula, Montana
Sec. Philip R. White.....638 Plymouth St., Missoula, Montana

INSTALLATIONS

Since the last issue of the Biologist went to press, the Phi Sigma family has added two new members to its growing numbers.

The petition of the Kansas University Biological Research Society for a charter was granted and installed as Kappa Chapter, on May 31, 1921. Prof. C. I. Reed, the national Secretary acted on behalf of the Central Governing Body and installed the chapter. The installation address is printed elsewhere in these pages.

The petition of the Phi Sigma Alpha Society at the University of Montana for a charter was granted and on June 4th, 1921, it was installed as the Lambda Chapter at a banquet held at the Shepard Hotel, Missoula, Mont. Prof. H. G. Owen, a member of Epsilon Chapter was the installing officer. An address was given by Dr. J. E. Kirkwood of the University of Montana.

EXPANSION

On November first, the "Darwinians" a local organization at Washington and Jefferson College of Washington, Pennsylvania, filed a petition, which has been acted upon favorably by the Central Governing Body and is now out taking the chapter vote.

On November sixteenth, the "California Biological Society", of the University of California, of Berkeley, California, filed a petition which has been favorably acted upon by the Central Governing Body and is now out taking the chapter vote.

EDITORIAL

The Editor wishes to take this opportunity to thank all those who have assisted him in any way, and in particular those who have had their copy in his hands on time. It requires the co-operation of us all to make a success of a publication of this sort, and when the National Officers are giving their time without compensation, it is the very least that we can do, to meet their requests as promptly as possible. From the business side, we are sorry to report that a very small number of the alumni have responded to the appeal that was made during last year, that as many as possible should subscribe for the *Biologist*. Up to the present time, we have mailed the publication to every member of the Society for whom we could get an address, so if you have not received a copy, it is your fault or the fault of your own chapter for not getting your name on the mailing list.

Unless the alumni will subscribe, it may be necessary for the Society to require the active members to subscribe for it to maintain it. However, it seems to us that when a poor missionary teacher in a far off corner of China not only sends us the one-dollar subscription price, but also adds fifty cents for postage, that it is time for some of us here at home to sit up and take notice.

Copy for the next issue of the *Biologist* should be in the hands of the Editor not later than April 5, 1922. Will all the chapter secretaries bear this in mind. Send in all lists and data asked for even if it is not complete. Do not hesitate to send in even more copy than is asked for.

INSTALLATION ADDRESS FOR KAPPA CHAPTER

May 31, 1921

By C. I. Reed, National Secretary

Members of Kappa Chapter, it is indeed a source of great pleasure to me to have entrusted to me the duty of installing this chapter. Having been a charter member of the charter chapter, I have witnessed the growth and progress of Phi Sigma, in the capacity of a national officer have passed upon petitions and authorized installations, but now for the first time, have I the pleasure of actually meeting with the new members whom today we number as our own.

Phi Sigma was established with a definite aim and for a specific purpose, and it does not fall within her province to attempt to deal with any other scientific problems than those of offering encouragement, sympathy, and aid, to the student who is just embarking upon a scientific career but who has not yet reached a stage of development where he or she feels at home in the atmosphere of the more mature groups who are carrying on major problems of scientific research. It is, then, our purpose to furnish for the student of initiative, a scholastic home wherein may be fostered the spark of investigative capacity which may be fanned into a flame that will blaze a path to real scientific constructive knowledge.

This, then, is essentially a student organization wherein the student alone can be held responsible for results. And here let me caution you: Do not, in the future conduct of affairs allow yourself to fall into the habit of depending upon faculty members for your programs. If you choose occasionally to gain inspiration from the work of some of your scientific peers, well and good. But if under stress of other seemingly more important matters, you learn to, in emergency, call upon your more favored members you will then have embarked on the stage of your progress which will terminate in the ultimate disintegration of the chapter and the thwarting of the purpose for which this organization was founded.

Do not misinterpret that statement. I would cast no disparagement upon the work or intentions of your true friends, the biological faculties, but they as well as you, must understand that this is your organization, the only place in which you may discuss scientific matters without the restraint and self-consciousness of the novice and the beginner.

On the other hand, do not make the mistake of departing from the departmental fold. You cannot hope to attain your ultimate purpose without the advice, aid, and encouragement of those who by practice and experience have already conquered the obstacles in the road which we would make easier for you. You must ever depend upon their co-operation and good-will.

To the members, then, who have attained a place for themselves in the scientific field where there is no longer question of ability, of sincerity, or of results, let me beseech you, do not hold lightly the lesser accomplishments of your less experienced students and followers. Do not scorn the modicum of initiative, of originality, or of individuality lest you blot out forever the germ of life just stirring in the seed which you have striven so long to implant and so relegate to some other field a mind and character which might, in future, with proper encouragement and direction become a source of pride to its scientific colleagues.

Such encouragement and aid, Phi Sigma attempts to give. And you should not lose sight of the fact that you are now in a position where it is required of you that you give as well as receive. The future responsibilities, faults, accomplishments of Phi Sigma rest on Kappa Chapter with a weight equal to that borne by the older chapters.

Remember that you now constitute a part of an organization that is bigger than the local chapter in proportion to the total number of chapters. Whatever is done must be done by all. Every group must occasionally compromise, for unity is just as essential here as in any other organization.

There are many matters of policy not yet clearly defined, for Phi Sigma is a young and rapidly growing organization. Whatever the future course, you must take part in the mapping of that course and if in future years our dreams are realized, then Kappa Chapter may well pride herself on her part in the realization of those dreams.

BRIEF ACCOUNT OF THE ORGANIZATION OF IOTA CHAPTER OF PHI SIGMA

Several graduate students of the School of Botany, School of Medicine, and Department of Zoology of Washington University at St. Louis, Mo., organized in January, 1921, with the aim of arousing and stimulating a feeling of co-operation and fellowship between the three schools. At the first meeting, Mr. George M. Armstrong, a member of Zeta Chapter at the University of Wisconsin, and at present a graduate fellow in the School of Botany, gave a brief account of Phi Sigma, what it stood for, where it was organized, and who were eligible for membership.

This was soon followed by a definite organization for the purpose of petitioning Phi Sigma for a local chapter. The petition was granted during April and Iota Chapter was installed on May 28th, 1921, Mr. Armstrong officiating on behalf of the Central Governing Body.

During the time between filing the petition and installation, the organization met monthly to discuss scientific subjects of general interest.

At the time of installation, the Schools of Botany and Medicine and the departments of Zoology, Anatomy, and Biochemistry were represented

EPSILON

Nov. 23, 1921.

While Epsilon has had her own troubles during and since the war, that have caused her to slow down with her activities, we are hoping that conditions will take a change for the better during the next year.

With this year the enrollment in the Department of Biology has increased from thirty to forty per cent, which is a much larger percentage the heavy increase in the enrollment of the University.

Due to the fact that the great majority of students in Biology leave at the end of the second year and enter medical schools, it does not leave many to select from, and we feel that it is not advisable to elect mere members to membership merely to have a large chapter. The large enrollment of this year bids fair to help us still it is a matter of regret that from the scholastic viewpoint, they are not so very promising.

ZETA

Nov. 8, 1921.

The year has started out very auspiciously for Zeta Chapter as we have already held three meetings that were full of pep and interest and we have a goodly number of prospective new members who will be voted upon by the time this letter goes to press.

We are laying emphasis on three types of meetings: (1) Closed business meetings, which are combined with programs in which our own members talk of their own research. (2) Open program meetings, at which we get some notable in the University to tell us about his research, and (3) Social meetings, which may or may not have a program.

At our first open meeting on October 12th, Dr. G. W. Keitt spoke on "Some Problems and Methods in Orchard Pathology."

At the closed meeting on Oct. 26th, in order to get better acquainted, each member was prepared to talk not more than five minutes about himself, covering such topics as home, where and when of undergraduate work, any particular experience, reasons for coming to Wisconsin, major and minor work, thesis problem, etc.

At the meeting on November 9th, two of our members will speak for twenty minutes each. Mr. Leukel, of the U. S. Dept. of Agr. on "Phases of Nematode Diseases of Cereals," and Mr. Hubert of the U. S. Forest Products Laboratory—subject to be announced. About Thanksgiving time, Zeta will initiate ten new members.

ETA

Oct. 2, 1921.

With new quarters, Olin Hall, for the Biological Department at Akron, a large enrollment, several additions to the Biological faculty, and considerable new equipment the outlook for Phi Sigma and the biological sciences is fine.

The program committee has outlined some very interesting programs the tendency being to promote individual research. We hope to be able to exchange some speakers with Alpha if arrangements can be made.

Mr. Melvin our President spent the summer in the Reserve Officers Training Corps, at Camp Knox, Kentucky.

Miss Vivian Whigam is studying medicine at the University of Michigan.

Miss Francis Carmichael is training for nursing at the Lakeside Hospital, at Cleveland, Ohio.

Miss Luise Kraus is working with the associated charities of Akron.

IOTA

The first meeting of the year was largely of a social nature as the time was taken up with canoeing at one of the local river resorts followed with a campfire lunch.

During the summer the Misses McCosh, and Woodbridge carried on research work at the Woods Hole Biological Station. Miss Green was also at Woods Hole taking Dr. Gray's course in Protozoology.

The chapter aims to hold several meetings during the year aimed at consolidating the interests of the three units composing the chapter, the Henry Shaw School of Botany, School of Medicine, and the Department of Zoology. Special emphasis will be laid upon arousing a group interest as the three branches are located in widely separated parts of the City.

St. Louis, Mo., October, 25, 1921.

KAPPA

Nov. 11, 1921

The Kappa chapter was installed at the University of Kansas, Tuesday May 31, 1921. Professor C. I. Reed acting on behalf of the Central Governing Body was in charge of the ceremony. The chapter was originally formed as the K. U. Biological Research Society in April 23, 1920. The constitution of this Society was modeled after the local rules for a Phi Sigma chapter. The original intention in forming the Society was to apply to Phi Sigma for a chapter to be installed here.

The number of charter members was fifty-five. This unusually large number is due to the fact that students who formed the K. U. Biological Research Society in the Spring of 1920 were included as charter members as well as those elected to the Society at both the fall and spring elections last year. Of this number thirty-five are now alumni members of Kappa chapter.

The opening of the fall term found nineteen active members in the University. Regular meetings are held twice a month and at each meeting some of the members conduct the program which is usually a report of some research problem finished or in progress. The second meeting was a departure from the rule as the chapter went on a picnic. Attendance at the meetings is good and a very active interest in the chapter is shown by the members. Professor Geo. E. Coghill gave the opening address of the year, his subject being, "Research, a Philosophy of Life."

Many of the charter members are now alumni members of Kappa and are scattered throughout the United States.

Edward Stevenson is instructor in the Department of Bacteriology at K. U.

Theodore S. Eliot studied during the summer at the Puget Sound Marine Biological Station, Friday Harbor, Washington.

LAMBDA

November 5, 1921.

Lambda Chapter held its fall initiation on the evening of October 27th with Dr. Neuman and the chapter president in charge of the ceremonies, admitting to full membership the five pledges which the chapter had at the time the charter was granted last spring. Professor Severy who comes from the Oregon Agricultural College was also initiated at the same time as he is with the Botany department at Montana.

A tentative program has been drawn up for the years work with several well known names on the list of men whom we hope to obtain to address the chapter at various times. As yet we are hardly started as an active chapter but we hope to be able to profit ourselves and our associates through Phi Sigma's work in the future.

During the summer Miss Bierman, Mrs. Spaulding and Mr. White attended the Biological Station at Yellow Bay on Flathead Lake. Miss Bierman prepared through original research and compilation of earlier reports a paper on "Plant and Animal Relations in the Neighborhood of Yellow Bay." Mr. White's and Mrs. Spaulding's work was in plant classification, checking up the identifications made previously and extending the knowledge of the flora of the region. Work was done in all types of habitat, thanks to the many excursions, from the arid glaciated slopes of Wild Horse Island to the lake swamp east of Polson and from the subalpine crests of the Mission range to the shores of Daphnia Pond. Altogether a very profitable term was the result. Dr. Elrod and Mr. Graff were the faculty members of Phi Sigma in charge with Mr. P. W. Silloway of Peoria, Ill., handling the work in Ornithology.

SOME RECENT CONTRIBUTIONS TO SCIENCE

Walter C. Kraatz Z.

"A Preliminary General Survey of the Macro-Fauna of Mirror Lake on the Ohio State University Campus".

The Ohio Journal of Science, Vol. 21. No.5.

Carl L. Wilson E.

"Signification of Mature Phloem in Herbaceous Types."

Thesis for M. S. degree at Cornell University.

Earl B. Working, E.

"Another High-temperature Record for Growth and Endurance."

Science, New Series Vol. LIV, No. 1390, Page 152.

Dr. Edwin B. Payson I.

Dr. M. G. Peterman I.

Dr. R. W. Webb I.

All three have papers in the hands of publishers but at present the exact references are not obtainable.

Dr. Edwin B. Payson I

"New and noteworthy plants from southwestern Colorado."

Bot. Gaz. 60: 374-382. 1915.

"The perennial scapose *Drabas* of North America."

Amer. Jour. Bot. 4: 253-267. 1917.

"The North American species of *Aquilegia*."

Contr. U. S. Nat. Herb. 20: 133-157.

Jessie M. Bierman A.

"Public School Medical Inspection."

Intermountain Educator 1920. Missoula, Mont.

C. M. Downs K.

"Further Studies on Plemorphic Strep." Sherwood & Downs.

J. Inf. Dis. 1919, V. 24, No. 2.

"Non-lactose Fermenting Organisms from Feces of Influenza Patients." Sherwood, Downs & McNaught. J. Inf.

Dis. 1920. V. 26, No. 1.

"Final Hydrogen Ion Concentration of *B. Typhosus*." Read before Am. Soc. of Bact., Chicago, Dec. 1920.

James B. McNaught K.

"The Algae of Kansas Reservoirs (Prelim Papers)."

Trans Kansas Acad. of Sci. V. XXVIII, 1918.

Also

Trans Kansas Acad. of Sci. V. XXIX 1920.

Also See

Sherwood, Downs & McNaught, J. Inf. Dis. V. 26 No 1, 1920.

Robert W. Webb I.

"Germination of certain fungus spores in relation to H-ion concentration."

Thesis for M. A. degree. Anns. Mo. Bot. Garden,

"Titration curves of certain liquid Media" (Webb and Karrer) Anns. Mo. Bot. Garden.

"Further study of spore germination in relation to H-ion concentration."

Thesis for Ph. D. degree. (In press at present.)..

ALUMNI NOTES

- J. Lyall L. Frank *θ*, is now Prof. of Biology at Cumberland University.
- Rolland D. Fox *H*, is at Akron University again this year taking graduate work.
- Earl B. Working *E*, is working during the summer season at the Coastal Laboratory and during the winter season at the Desert Laboratory, Department of Botanical research of the Carnegie Institution of Washington, D. C. at Carmel, California and Tuscon, Arizona respectively.
- Clare A. Stewart *E*, is teaching in the High School at Wiggins, Colorado.
- Wayne N. Aspinall *E*, is teaching in the High School at Palisades Colorado.
- Orvil H. Huling *E*, is teaching at Sugar City Colorado.
- Holbrook Working *E*, announces his marriage to Miss Helen Rider. At home after October 15th, 2164 Knapp St., St. Paul, Minnesota.
- C. R. Kellogg *E*, has left the Anglo-Chinese College and is now Professor of Zoology at the Fukien Christian University at Foochow, China.
- Edwin W. Payson *J*, has been in residence at the Gray Herbarium the past summer doing special research work. Dr. Payson is now the assistant Prof. of Botany at the University of Wyoming, Laramie, Wyoming.
- Robert W. Webb *J*, is an assistant pathologist in the Office of Cereal Investigations with headquarters at Madison, Wisconsin.
- M. G. Peterman *J*, is connected with the surgical unit of the St. Paul City Hospital, at St. Paul, Minnesota.
- Alvin H. Hellmick *J*, is connected with the zoological staff of the St. Louis City High Schools, St. Louis, Mo.
- Marion Crane *J*, is continuing her research work towards a Ph. D. degree at Johns Hopkins University.
- Mary J. Brown *J*, received the M. S. degree last June and is now an instructor at Transylvania University, Lexington, Kentucky.
- Bertha Uhlemeyer *J*, is now an instructor in the department of zoology at Washington University, St. Louis, Mo. During the

past summer she carried on research work at the Woods Hole Biological Station, Woods Hole, Mass.

Geo. W. Armstrong Z, has been working in the Office of Cotton and Truck Diseases at Washington, D. C. during the summer.

Jessie M. Bierman A is taking preliminary training at the University of Chicago preparatory to entering Rush Medical Institute.

Mildred A. Carpenter A is employed in testing by a milling company at Great Falls, Montana. Address, 1715 2nd. Ave, North, Great Falls, Montana.

Elizabeth B. Maclay A, is taking a three years course at the University of Minn. training School for nurses.

Albert N. Stewart A has arrived at Nanking, China where he is connected with Nanking University. Address. Nanking University, Nanking, China.

Prof. Harold Cummins, B, past national president is now at Tulane University.

Dr. Alice M. Boring A, is now connected with Wellesley College.

Wm. E. Hoffman K, is now with the division of Entomology, University Farm, St. Paul, Minnesota.

Helen Naismith K, was a member of the Kansas City High School last year in the Biology Department; this year she is assistant treasurer of the Stadium-Union Fund of the University of Kansas.

Dr. Hubert Sheppard K, spent the summer studying at Tulane University. He is now head of the Anatomy Department of the School of Medicine, Emory University, Atlanta, Georgia.

Mary M. Anderson K, is in training at the Presbyterian Hospital, Chicago, Ill.

Martha Bays K, is Bacteriologist at Enid General Hospital, Enid, Oklahoma.

Fred D. Butcher K, is Extension Entomologist for Iowa Agr. College, Ames, Iowa.

Ida Radotinsky K, is first assistant to Dr. Claussen in the Public Health Laboratory at the University of North Dakota.

E. L. Treece K, was at Chicago this summer studying at Chicago University.

Cornelia Downs K, attended Chicago University during the summer quarter.

Dr. H. C. Tracy K, spent the summer in research at Woods Hole, Mass.

Erma Smith K, was in Chicago the first part of the summer. She spent the last six weeks at Woods Hole, Mass., and is this year teaching in the Physiology Department at Vassar College.

Robert Isenberger K, and H. S. Faris K, were at Rosedale during the summer studying Pathology at the University of Kansas School of Medicine. Mr. Isenberger remained there this fall as assistant in the Department of Pathology.

SOME FORMER CONTRIBUTIONS TO SCIENCE

Due to the fact that the early issues of the Biologist are not available to more than a few of the members of the organization we print below some of the references that appeared in them.

Eric S. Cogan A.

"Contributions Toward Our Knowledge of the Homoptera of South Africa."

Ohio Journal of Science, Vol. XVI, No.5, P, 161-200.

Ohio Journal of Science, Vol. XVI, No. 7, pp, 299-323.

A. E. Waller A.

"Xenia in Maize."

Amer. Botanist, Vol. XXII, No. 2, pp, 40-45.

Dorothy Osborn A.

"Inheritance of Baldness."

Journal of Heredity, Vol. VII, No. 8, pp, 347-355.

C. I. Reed A.

"The Epibranchial Placodes of Squalus Acanthias,"

Ohio Jour. of Science, Vol. XVI, No. 8, pp. 336-353.

R. F. Hussey B.

"Notes on Some Spring Bords of LaPlata"

Auk, Vol. XXXIII, October 1916, pp, 384-399.

T. L. Squire B.

"The Development of the Pulmonary Circulation in the Chick."

Anatomical Record, Vol. X, No. 6, April 1916.

Wallace Craig Δ

"Synchronism in the Rhythmic Activities of Animals."

Science N. S. 44, 748-786

Alice M. Boring Δ.

"Further Notes on the Chromosomes of the Ceropidea."

Biol. Bull. XXIX, 5, 1915.

Katherine W. Okey A.

"The Relation of the Profundus and Gasserian Ganglia of the Embryo of The Urodele, Plethodon Glutinosus".

Ohio Jour. of Science, Vol. XVII, No. 2, 1916, pp, 25-51.

OUR RESPONSIBILITY

EMORY W. SINK, National President.

That Phi Sigma has had a gradual but continuous growth is a settled fact. With its small beginning at Ohio State in 1915, the society now embraces nine active chapters. During the last three years, we claimed that the war arrested the development of Phi Sigma, but the war is now over. It is time for Phi Sigma to put on its big building program. It must expand not only in mere number of chapters, but its component members must exemplify the ideals and characteristics which Phi Sigma endeavors to create and maintain. Every member should lay stress upon the things for which Phi Sigma stands, and be instrumental in fulfilling the ideals and aims of the constitution. To float with the current shows lack of energy and that essential quality which leads to success. We must be ever ready to stem the tide and pull with added strength so that the little which has been accomplished shall not be lost. We should not be content with merely more chapters on our list, but we must plan accurately and surely lest our society deteriorates because of poor materials. Each chapter should see that its old members take an active interest in the society as a whole, and each member should shoulder the responsibility of adding any suitable members to its fold. The lost nail in the horseshoe may prove to be the remote cause of a lost race. Likewise with our society, much depends upon the individual members of the several chapters. Each member should seize the golden opportunity of making the best use of time and energy, thereby producing the best scholastic results. Be up and doing. Seize the present and the future will take care of itself. It is only by such united aggressiveness that any organization can prove worthy of the name. Phi Sigma—we congratulate you on the past. Let your loyal members now endeavor not only to uphold your national reputation, but may they ever be active in upbuilding your ideals and higher aims.

HINTS AND SUGGESTIONS FROM THE SECRETARY

C. I. REED, National Secretary.

Since coming into office the National Secretary has noted many things on the part of the chapter officers that have constituted serious handicaps on the operations of the national officers. It is assumed that these things are merely due to lack of information as to what is necessary and to a failure to appreciate the situation fully. Therefore it has seemed advisable to give some brief instructions, the following of which will greatly facilitate the work of this office and I am sure that also of the other officers.

By way of preface let me remind all the chapters that the national officers are all busily engaged thru most of their time in the necessary activities incumbent upon their various lines of activity. The work of Phi Sigma, while not occupying

a secondary place with any of them, must, nevertheless, be done on spare time or on time that means a sacrifice of personal or professional duties. Of course this is true of every member of Phi Sigma but the national officers have to deal with nine active chapters, with many alumni, with prospective chapters and their problems, and finally, with one another. All their deliberations must be carried on by correspondence and since they are widely scattered this means delays and possible failures to understand instructions or discussions or at least the risk of this for all of them realize the necessity of fine understanding to have harmony.

A further handicap to their work lies in the small income to the National Treasury, a desirable feature from one point of view but one which has not infrequently necessitated the bearing of official expenses from a personal budget.

With these points in mind then will the active chapters please realize that whatever they may do that will minimize in any way the work of the national officers, will by that margin increase the efficiency of Phi Sigma? How then, may these aids be accomplished?

By acknowledging promptly any communications from the national officers. The Secretary has found it necessary in some cases to direct three and four letters to certain chapters before a reply was received. It is found also that things which should obviously come under the attention of the Secretary are sent to the other officers. The minimizing of his work is appreciated but it does not make for efficiency in doing his work.

By taking pains to report initiations *promptly* to the Secretary and Treasurer. It is very difficult for the latter to give a correct account of money received otherwise. The name of each initiate should be sent with the money. Otherwise the Secretary must copy the names from membership records and send them on to the Treasurer in order that the latter may be sure of keeping his accounts correct. It has been the custom to send only a certain sum for so many initiations. That is not good business. It should be made possible for the Treasurer to designate by name the individual for whom a fee is paid. There is reason to believe that some chapters initiated members last year whose records were never sent in.

By taking pains to see that membership record blanks are filled in completely, that the name of the Chapter and the number representing individual chronological order of initiation are entered and that the date of the initiation is recorded. All these points may seem trifling details but the careful observance of such points minimize tremendously the routine duties of the Secretary particularly. For example there are now on file several records on which only the name and number of the initiate with the name of the Chapter are entered. There is nothing but the chronological order to indicate the probable date of initiation or any other fact regarding qualifications or scientific attainment. The Secretary may be asked to verify the date of initiation or some other point of record. It would be impossible to do so from many of the records as now on file. One record contained absolutely no fact that would identify the individual with any chapter except the presence of a word in the subject of one of publications. This record, fortunately, was

sent in with a group of records from the same chapter, otherwise it would not have been possible to identify it.

By having the chapter secretary sign every record. Possibly half of the records on file do not carry this endorsement. In case of any question being raised it should be possible for the National Secretary to authenticate any record at once.

Not infrequently in any organization, one may hear the query as to what the national organization is doing that the individual groups may not accomplish. A prominent member of Sigma Xi recently asked this question with regard to that body. One of the very practical things that may be done, in fact, has already been done by another scientific society is the organization of an employment agency for the members. Small funds would be necessary but little else but co-operation. Would such a thing be of value to the membership of Phi Sigma? I am inclined to think that it would. What are the opinions of the members?

How many active members of the chapters would compete if a prize were offered for the best piece of research work done by any active member, provided it did not involve too much routine? Let's hear some opinions on that question. Would it stimulate interest in research work locally?

Last year there was a statement published in the Biologist relative to the possibility of getting support and recognition from the National Research Council. Briefly the situation is as follows; This body has taken a very kindly interest in Phi Sigma and it seems that we may ultimately be able to interest it in a more substantial fashion. It should be borne in mind, however, that absolutely no promises are made. For the present we must prove that, as a national organization we are really able to accomplish results scientifically. One of the ways for doing this would be the establishment of scholarships and awards for scientific work. But to do this we must have a larger income to the National Treasury.

From all this it will be seen that Phi Sigma, in our belief, is now in need of greater improvement internally and that when such improvement comes the society will occupy a place that many other scientific organizations have failed to attain. One needs only to sit in a meeting of Sigma Xi to realize that that body is only just now, in spite of its greater age, attacking some of the fundamental problems that we have had under consideration from the beginning. This last statement is not made with the intention of reflecting in any way upon that very highly honored body but merely as a means of calling attention to the fact that our difficulties are of the times and are not confined within the limits of our own organization.